

Title (en)

Method and apparatus for assessing the quality of and control and monitor pressure welding and fusion welding processes

Title (de)

Verfahren und Vorrichtung zur Erfassung der Qualität und zur Steuerung und Regelung von Pressschweiss- und Schmelzschweissprozessen

Title (fr)

Procédé et appareil pour évaluer la qualité, contrôler et surveiller des procédés de soudage

Publication

EP 1249298 A3 20040421 (DE)

Application

EP 02005357 A 20020314

Priority

DE 10117854 A 20010410

Abstract (en)

[origin: EP1249298A2] Device for determining the quality of pressure welding and fusion welding processes, especially resistance welding processes and/or the quality of the welding joints produced, comprises a stream determination unit for determining the stream which flows through the welding point or which is correlated with the power production on the welding point, an evaluation unit connected to the stream determination unit, and a correlation unit. An Independent claim is also included for a process for determining the quality of pressure welding and fusion welding processes, especially resistance welding processes and/or the quality of the welding joints produced. Preferred Features: The correlation unit is a neuronal network, a band pass filter assigned to frequency regions or a Fourier analysis device.

IPC 1-7

B23K 11/25; B23K 11/24; B23K 9/095

IPC 8 full level

B23K 11/25 (2006.01)

CPC (source: EP)

B23K 11/257 (2013.01); **B23K 31/006** (2013.01)

Citation (search report)

- [A] EP 0774319 A1 19970521 - MIYACHI TECHNOS KK [JP]
- [A] SU 1258653 A1 19860923 - VNI [SU]
- [A] US 5489757 A 19960206 - SCHUERMANN HUBERT [CH], et al
- [A] EP 0668711 A1 19950823 - DANILOV VLADIMIR [DE]
- [A] QUERO J M ET AL: "Neural network approach to weld quality monitoring", INDUSTRIAL ELECTRONICS, CONTROL AND INSTRUMENTATION, 1994. IECON '94., 20TH INTERNATIONAL CONFERENCE ON BOLOGNA, ITALY 5-9 SEPT. 1994, NEW YORK, NY, USA, IEEE, 5 September 1994 (1994-09-05), pages 1287 - 1291, XP010137516, ISBN: 0-7803-1328-3

Cited by

DE102018105893A1; WO2010065975A1; CN113478056A; EP2954970A1; CN102239026A; DE202011000875U1; CN117983937A; EP3079162A1; CN117428302A; DE102018105893B4; US8912786B2; EP3539713A1

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